(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



| 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 188

(43) International Publication Date 8 August 2002 (08.08.2002)

PCT

(10) International Publication Number WO 02/061613 A3

(51) International Patent Classification?:

(21) International Application Number: PCT/EP02/01027

(22) International Filing Date: 1 February 2002 (01.02.2002)

(25) Filing Language:

English

G06F 17/30

(26) Publication Language:

English

(30) Priority Data: 101 04 831.9

1 February 2001 (01.02.2001) DE

(71) Applicant (for all designated States except US): SAP AK-TIENGESELLSCHAFT [DE/DE]; Neurottstr. 16, 69190 Welldorf (DE).

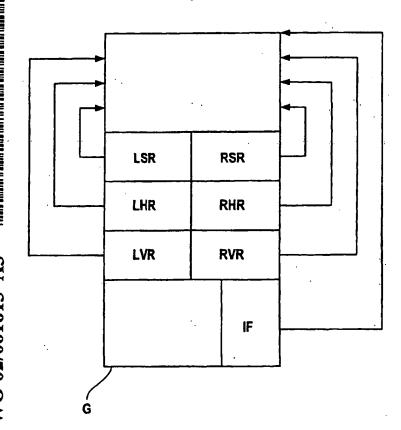
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): VON BERGEN,

Axel [DE/DE]; Breslauerstr. 27, 69168 Wiesloch (DB). SCHWARZ, Arne [DE/DE]; Hildastr. 2, 69115 Heidelberg (DE). SAUERMANN, Volker [DE/DE]; Keplerstr. 24, 69120 Heidelberg (DE).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, BS, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent

[Continued on next page]

(54) Title: DATABASE SYSTEM AND QUERY OPTIMISER



(57) Abstract: Method optimising a query with respect to a database structure, comprising receiving database information with respect to a specific data source, generating a search database structure for said data source, based on said received data source information, receiving a query request for said data source, analyzing the search database structure by counting a number of hits for respective sections of said query request, and calculating an optimized query request based on the analysis performed.

WO 02/061613 A3

BEST AVAILABLE COPY

WO 02/061613 A3

(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, (88) Date of publication of the international search report: NE, SN, TD, TG).

4 September 2003

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Intermediation No PCT/EP 02/01027

			101711 02	01027
A CLASSI IPC 7	FICATION OF SUBJECT MATTER G06F17/30			
According to	o international Patent Classification (IPC) or to both national classific	etton and IPC		
	SEARCHED			
Minimum do IPC 7	ocumentation searched (classification system followed by classificat G06F	lon symbols)		
Documental	tion searched other than minimum documentation to the extent that	such documents are inch	uded in the fields se	arched
	ata base consulted during the international search (name of data ba ternal, COMPENDEX, INSPEC, PAJ, IBM	•		
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where appropriate, of the re	Relevant to dalm No.		
X	US 5 355 473 A (AU LAWRENCE) 11 October 1994 (1994-10-11) column 1; line 68 -column 2, line	e 19		1-5,11
X	THEO HÄRDER, ERHARD RAHM: "Datenbanksysteme" 1999 , SPRINGER , HEIDELBERG XPO page 203; figure 7.13 page 207, line 24 -page 210, line page 227 -page 242 figure 7.15 figure 8.1 figure 8.2			6,8-10
Y A		- /- -		7 1-5
X Furth	ner documents are listed in the continuation of box C.	X Patent family	members are listed	in annex.
"A" docume consider filing de "L" docume which i chatton "O" docume citier n "P" docume later th	nt which may throw doubts on priority claim(s) or is cited to establish the publication date of another no or other special reason (as specified) ant referring to an oral disclosure, use, exhibition or	T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention. **C document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone of councies to involve an inventive step when the document so considered to involve an invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combined with one or more other such documents, such combination being obvious to a person skilled in the art. **A document member of the same patent family Date of mailing of the international search report		
9	May 2003	23/05/2	003	·
Name and m	nailing address of the ISA European Palem Office, P.B. 5818 Patentiaan 2 NL ~ 2280 HV Rijswijk Tel. (491-70) 340-2040, Tx. 31 651 epo nl, Fax: (431-70) 340-3016	Authorized officer E1 chena	uer, L	÷

INTERNATIONAL SEARCH REPORT

Intermediation No
PCT/EP 02/01027

	<u> </u>	PCIZEP 0	02/01027		
	ntion) DOCUMENTS CONSIDERED TO BE RELEVANT		15		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.			
X	DATE C J: "INTRODUCTION TO DATABASE SYSTEMS, Vol. 1" 1990 , ADDISON WESLEY , READING, MA, US XP002238012 paragraph '03.6! figures 3.17,3.18		6,8-10		
Y A	figures 3.17,3.18	·	7 1-5		
Y	US 5 557 786 A (JOHNSON JR HAROLD E) 17 September 1996 (1996-09-17) column 5, line 14 - line 16		7		
ļ					
		•	· .		
		٠.			
	·				
		•			
	·				
•			•		

INTERNATIONAL SEARCH REPORT

nformation on patent family members

intention nei Application No
PCT/EP 02/01027

Patent document cited in search report		Publication date		Patent family member(s)	Publication date	
US 5355473	Α	11-10-1994	NONE		·	
US 5557786	A	17-09-1996	NONE			_

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☐ BLACK BORDERS	
IMAGE CUT OFF AT TOP, BOTTOM OR SIDES	
☐ FADED TEXT OR DRAWING	
☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING	•
☐ SKEWED/SLANTED IMAGES	
☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS	
☐ GRAY SCALE DOCUMENTS	
☐ LINES OR MARKS ON ORIGINAL DOCUMENT	
☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY	
OTHER:	

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.